

**WHAT IS CLAIMED IS:**

1. A method of exchanging data between first and second components having first and second native data structure formats, respectively, comprising: /

exchanging native data structure format information between the first and second components;

generating data in the first native data structure format;

transmitting the generated data between the first and second components;

translating the generated data into the second native data structure format based on the exchanged native data structure format information.

2. The method of claim 1 wherein the exchanged data structure format information includes first data structure format information corresponding to the first native structure format and second data structure format information corresponding to the second native structure format.

3. The method of claim 2 wherein exchanging includes the sending the first data structure format information from the first component to the second component and sending the second data structure information from the second component to the first component.

4. The method of claim 3 wherein the exchanging occurs before the generating.

5. The method of claim 3 further comprising establishing a communication link between the first and second components, wherein the exchanging of native data structure format information occurs substantially immediately after the communication link is established.

6. The method of claim 1 wherein the exchanged data structure format information includes a global ID for each of a plurality of variables included in the generated data.

7. The method of claim 6 wherein each global ID is based on a class and a construct by which the corresponding variable is defined.

8. The method of claim 6 wherein each global ID is based on a class, a construct, and a variable number by which the corresponding variable is defined.

9. The method of claim 6 wherein each global ID is based on a location of the corresponding variable within a construct.

10. The method of claim 6 wherein each global ID is based on a location of the corresponding variable within a class.

11. The method of claim 1 wherein the exchanging, generating, transmitting, and translating are implemented via object-oriented programming.

12. The method of claim 1 wherein the exchanging occurs before the transmitting.

13. The method of claim 1 wherein the exchanging occurs after the transmitting.

14. The method of claim 1 wherein the exchanging and the transmitting occur substantially simultaneously.

15. The method of claim 1 wherein the translating occurs after the transmitting.

16. The method of claim 1 wherein the translating occurs before the transmitting.

17. The method of claim 1 wherein the first and second components are within a single computer.

18. The method of claim 1 wherein the first and second components are within a single switch.

19. The method of claim 1 wherein the first and second components are within a single server.

20. The method of claim 1 wherein the first and second components comprise a legacy component and an upgraded version of the legacy component.

21. The method of claim 1 wherein the translating includes converting received generated data between first and second data types.

22. The method of claim 21 wherein the first and second data types are each one of big Indian and little Indian.

23. The method of claim 1 wherein:  
exchanging native data structure formation information includes transmitting first native data structure format information generated by the first component from the first component to the second component; and  
translating the generated data into the second native data structure format includes correlating IDs in the first native data structure format information with associated IDs in second native data structure format information generated by the second component.


24. The method of claim 1 wherein the translating includes truncating variable values based on the exchanged native data structure format information.

25. The method of claim 1 further comprising initializing variables not found in the generated data.

26. The method of claim 25 wherein the initializing includes storing default values for the variables not found in the generated data.

27. The method of claim 25 wherein the initializing includes storing user-input values for the variables not found in the generated data.

28. The method of claim 25 wherein the initializing includes storing values for the variables not found in the generated data based on user-specified conditions.

29. A processing system for exchanging messages between first and second components having first and second native message formats, respectively, comprising:   
means for exchanging native data structure format information between the first and second components;  
means for generating data in the first native data structure format;  
means for transmitting the generated data between the first and second components; and  
means for translating the generated data into the second native data structure format based on the exchanged native data structure format information.

30. The processing system of claim 29 wherein the exchanging means includes means for sending first data structure format information from the first component to the second component and means for sending second data structure information from the second component to the first component.

31. The processing system of claim 29 further comprising means for establishing a communication link between the first and second components, wherein the means for exchanging native data structure format information is responsive to the establishment of the communication link.

32. The processing system of claim 29 further comprising means for generating a global ID for each of a plurality of variables included in the generated data.

33. The processing system of claim 29 wherein the exchanging means, generating means, transmitting means, and translating means comprise object-oriented programming means.

34. The processing system of claim 29 wherein the first and second components are within a single computer.

35. The processing system of claim 29 wherein the first and second components are within a single switch.

36. The processing system of claim 29 wherein the first and second components are within a single server.

37. The processing system of claim 29 wherein the first and second components comprise a legacy component and an upgraded version of the legacy component.

38. A program product, comprising:  
a computer-readable storage medium having a method encoded thereon, the method comprising;  
    exchanging native data structure format information between first and second components having first and second native message formats, respectively;  
    generating data in the first native data structure format;  
    transmitting the generated data between the first and second components; and  
    translating the generated data into the second native data structure format based on the exchanged native data structure format information.

39. The program product of claim 38 wherein exchanging includes sending first data structure format information from the first component to the second component and sending second data structure information from the second component to the first component.

40. The program product of claim 38 wherein the method further comprises generating a global ID for each of a plurality of variables included in the generated data.

41. The program product of claim 38 wherein the program product is an object-oriented program product.

42. The program product of claim 38 wherein the storage medium is a magnetic recording medium.

43. The program product of claim 38 wherein the storage medium is an optical recording medium.

44. The program product of claim 38 wherein the storage medium is a network distribution medium.

45. A method of processing data sent from a first component and received at a second component, the first and second components having first and second native data structure formats, respectively, comprising: ✓

receiving first native data structure format information at the second component;

receiving the data in the first native data structure format to be processed at the second component; and

translating the received data into the second native data structure format based on the received first native data structure format information.

46. The method of claim 45 wherein the second component is a legacy component and the first component is an upgraded legacy component.

47. The method of claim 45 wherein the second component is a legacy version of an application and the first component is an upgraded version of the application.

48. A method of processing data to be transmitted from a first component to a second component, the first and second components having first and second native data structure formats, respectively, comprising: ✓

generating first native data structure format information at the first component;

generating data in the first native data structure format and corresponding to the generated first native data structure format information;

transmitting the first native data structure format information to the second component;  
and  
transmitting the generated data in the first native data structure format to the second component.

49. The method of claim 48 wherein the first native data structure format information is configured to assist the second component's translation of the data translated in the first native data structure format into the second native data structure format.

50. The method of claim 48 wherein the second component is a legacy component and the first component is an upgraded legacy component.

51. The method of claim 48 wherein the second component is a legacy version of an application and the first component is an upgraded version of the application.

52. The method of claim 48 further comprising establishing a communication link substantially immediately prior to transmitting the first native data structure format information and the generated data in the first native data structure format to the second component.

53. The method of claim 52 wherein the first native data structure format information is transmitted to the second component once per each establishment of the communication link, and the generated data in the first native data structure format includes a plurality of data messages each in the first native data structure format per each establishment of the communication link.